



SEQUENCE LISTING

<110> Perera, Ranjan
Rice, Stephen
Eagleton, Clare

<120> Compositions and Methods for the
Modification of Gene Expression

<130> 11000.1036c5

<150> U.S. No. 10/291,447
<151> 2002-11-08

<150> U.S. No. 60/425,087
<151> 2002-11-08

<150> U.S. No. 10/137,036
<151> 2002-04-30

<150> U.S. No. 09/724,624
<151> 2000-11-28

<150> U.S. No. 09/598,401
<151> 2000-06-20

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<150> U.S. No. 60/146,591
<151> 1999-07-30

<150> U.S. Patent No. 09/276,599
<151> 1999-03-25

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<213> Eucalyptus grandis

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<213> Eucalyptus grandis

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<213> Pinus radiata

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caagtgatth	gaattggaaa	tgaagagcga	gaatggcggt	gtcatgaccg	ggagcaacca	300
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<210> 14

<211> 763

<212> DNA

<213> Pinus radiata

<400> 14

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tgtattttct	actctaccac	tccaactacc	actccaactt	attgccgcaa	aagagagagg	180
ttcccaaact	ctgtcggaat	tctcccactc	aaagcattaa	aggaaagatc	taattgctgc	240
aaaaaagaga	gattcccaat	atattttctca	actcccttca	aatgatttct	cactctacca	300

ctccaactcc	cttcaaatga	tttctcactc	taccactcca	acttccttca	aatgctgtga	360
gtttttgttg	taattgcccc	gtctatttat	aatcgagca	gcactcgtca	tataaagacc	420
cgtgcgtgtg	aacaacaatg	gcggtgtctt	gactgggagc	aaccgcataa	agaaagtggg	480
cttcatacat	taaaaaaatc	tgtaaatttt	acggatttgg	aaaaaggaag	agcaggaggg	540

acctcccgac	ttgacccgag	aatggcggtg	tcttgaccgc	gtaaagaaag	tggctcttctg	600
tacccgactt	gacccgaaaa	aagaggaaac	gttgaacgag	acaatctctg	ggaacttcat	660
cgaaatgaac	ctcacgactt	gactctttcg	attgtactgt	tttcattgtt	cccgcgtaaa	720
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<210> 15
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Made in a lab

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	40

<210> 16
 <211> 51
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Made in a lab

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	51

<210> 17
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Made in a lab

<400> 17	
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	27

<210> 18
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Made in a lab

<400> 18	
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	30

<210> 19
 <211> 31

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Made in a lab

<400> 19
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<210> 20
 <211> 363
 <212> DNA
 <213> Eucalyptus grandis

<400> 20
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 attgtgaaat tcacgataga gctaacaaaa ataaaggtag ttggtgggtt aaccagttta 180
 aaaaagaaca ataatttgaa gagaggagag agagagagag gagggggaga gcatttcgat 240
 aaattcacta gaaaaaatgc gtgttttagt ataaatgaga gtggaaatag ggccatctag 300
 ggaacgatcg atcgccctcg caccgggcca tctggagagt ctgtttatac ttctctccgg 360
 ctt 363

<210> 21
 <211> 839.
 <212> DNA
 <213> Pinus radiata

<220>
 <221> misc_feature
 <222> (1) ... (839)
 <223> n = A,T,C or G

<400> 21
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 gttatttttc tcgactatgg ctgacattac tagggctttc gtgctttcat ctgtgttttc 180
 ttcccttaat aggtctgtct ctctggaata ttttaatttc gtatgtaagt tatgagtagt 240
 cgctgtttgt aataggctct tgtctgtaaa ggtttcagca ggtgtttgctg ttttattgctg 300
 tcatgtgttt cagaaggcct ttgcagatta ttgcgttgta ctttaatat ttgtctccaa 360
 ccttggtata gtttccctcc tttgatctca caggaaccct ttcttctttg agcattttct 420
 tgtggcgttc tgtagtaata ttttaatttt gggcccggtt tctgagggtta ggtgattatt 480
 cncagtgatg tgctttccct ataaggctct ctatgtgtaa gctgttaggg tttgtgcgtt 540
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 ttttctaatt cgtggattgc tggtgccata ttttatttct attgcaactg tattttaggg 660
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<210> 22
 <211> 881
 <212> DNA
 <213> Eucalyptus grandis

<400> 22
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aaaacaaacg	cctcttgatt	tcctcaaacc	ccaaaccgaa	tccctcgtca	aggggcaagg	180
cttttggtcc	cgcgggccca	cggatcgctc	gttcccgtct	cgccacgtcg	cgtcgcagcg	240
tgtcgagcaa	acagaggggt	ccgagcgact	ataaaatccc	gacgccatcg	acaccacagt	300
ccatcgaaaa	ccttgttcaa	ttcccaagtg	aaagtgaagta	actgtgaacg	aagagttgaa	360
ctttgcatct	cggcgtgtgg	attcaagagg	aagcagcaaa	gtggaaatgg	acaactccaa	420
gatgggcttc	aatgcagggc	aggccaaggg	ccagactcag	gagaagagca	accagatgat	480
ggataaggca	tccaacactg	ctcaatctgc	aagggtattcc	atgcaagaga	ctggtcagca	540
gatgaaggcc	aaagcccagg	gtgctgctga	tgcagtgaag	aatgccaccg	ggatgaacaa	600
atgaagagct	caagacatga	atgaataaat	aattaagctc	tggttatcat	ttgcttttcc	660
ggtcgtttgt	tgtcctgttt	ttccttgctc	agagcttatt	atgagggtcc	ttttgctctt	720
tccttagttc	tttttgtttc	ttggttgctc	catgaagaga	gcaactctct	gtgtttgaga	780
gtactcatct	cgcttcataa	ggtctcagta	tgtagtgtgc	tttcgagaat	gttatgttct	840
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<210> 23

<211> 350

<212> DNA

<213> Eucalyptus grandis

<400> 23

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accataatat	attcaacgtg	atgcttaaac	tttaatcgag	tatgcaatgt	agtccataat	180
atattcaata	tgatccttca	atccaattga	agtgtgcaat	gtggtcgcta	gattttttta	240
tgtattcaac	ttagtcttta	agctaccaac	cttccaataa	tttatgtttt	agaaataata	300
tcgaacatct	tttatattat	tcaaggaata	aaacgaacat	gcatcaaaag		350

<210> 24

<211> 49

<212> DNA

<213> Eucalyptus grandis

<400> 24

actatagggc	acgcgtggctc	gacggcccgg	gctgggtactt	tttttttct		49
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<210> 25

<211> 909

<212> DNA

<213> Eucalyptus grandis

<400> 25

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tatgatgctg	atgtgatagg	cagatgaatg	gcagttgagc	taagttaaag	ccctcataca	180
tagatcagag	caggaggagt	agtatatata	ggcatcttgg	caagtcacct	aaagagcggc	240
ttcgtgtatt	cccacatatt	cctctctcgt	tagaacgttc	agaaatgggt	ggccctttga	300
ctcttgatgc	agaggttgag	gttaagtctc	ctgcagacaa	gttctgggtg	agcgtgagag	360
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ttgttaaagt	atcaaaggag	aagattgatg	gtgtggacga	agcagacaag	gtcgtgacct	540
acagcgttat	agacggtgat	ctcctgaagt	actacaagaa	tttcaatggc	agcatcaagg	600
taatttcctaa	aggagacgga	agcttggtga	aatggctcgtg	tgggtttgag	aaggcaagcg	660
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atgagttcat	cctcaaggca	tagatgccgc	caatcgctcta	tccggatttg	cactaaatat	780
caataaaaata	atgctggagct	ggactccgca	cttctatatg	catctagtat	gagagtcccc	840
tgctgtctct	gtttgtattc	acttgaaggg	ttttctatta	agctctcttt	actgcctccg	900
aaaaaaaaaa						909

<210> 26
 <211> 430
 <212> DNA
 <213> Eucalyptus grandis

<400> 26
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 tgtaccgtga gcacggaaac gtgcgcgacg tattgggatt ggaccgga ctcaaggtcc 180
 ctgaattgca agaaggccaa gtgctggtta aagttcttgc cgcagcgctc aatccagtcg 240
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 gttacgatct cgccggcggt gtggtaaagg tgggcccgcga agtgaaggag ctcaagatcg 360
 gggacgaggt atatggattt atgtttcacg ccaagaaaga cgggacgctg gctgagtacg 420
 cagccgtgga 430

<210> 27
 <211> 1253
 <212> DNA
 <213> Eucalyptus grandis

<400> 27
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 tccattcttc tccaatggct gcgaatttcg tcattccaac caaatgaag gcttgggtgt 120
 accgtgagca cggagacgtc gccaacgtat tgggattgga cccggaactc aaggctccctg 180
 aattgcaaga aggccaaagt ctggttaaag ttcttgccgc ggcgctcaat ccaatcgaca 240
 ccgcgagagt gaaggggggt atcaagctcc cgggcttttc tctaccggcc gtgccagggt 300
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 ccgtggaaga gtcgttcttg gctttgaagc ccaagaagct gcgtttcggg gaggctgctt 480
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 tggtgaagag cttgggtgct gatctggcca ttgactacac caaagtcaac tttgaagacc 720
 tcccagaaaa gtttgatgtt gtctacgata cagttgggga aattgagcgg gcagcgaagg 780
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 cgagtcctta attagtagtc gatggtgctt gctgtttgtc tccgtacatt cagcttctct 1140
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 ttactttttc tataaacaat attacaaact caaaaaaaaaa aaaaaaaaaa aaa 1253

<210> 28
 <211> 99
 <212> DNA
 <213> Eucalyptus grandis

<400> 28
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 tttctccaat ggctgcgaat ttcgtcattc cgacccaaa 99

<210> 29
 <211> 927
 <212> DNA
 <213> Eucalyptus grandis

<400> 29
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ctgtaattgc tcatcttctt taccaaattc tctaatttgg ccggcgaagg gctgacaagg 180
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caaaggatct tggtttctac atttgacta caccctaaaac ccaatttcta agttaaatca 480
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<210> 30
<211> 411
<212> DNA
<213> Eucalyptus grandis

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ttgcacgctc tttctatcca ctttattatg ccatcacatg agcgttttcc acgcgtaaat 360
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<210> 31
<211> 178
<212> DNA
<213> Eucalyptus grandis

<400> 31
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aggaacttgg gaagaaccaa tgatgcctgg tctactgagt atcgatgaat gcaatagt 178

<210> 32
<211> 178
<212> DNA
<213> Eucalyptus grandis

<400> 32
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gcagaaaccc agtacactcg ccaaaccggag ctaaacctga tggccatacg atttcttt 178

<210> 33
<211> 178
<212> DNA
<213> Eucalyptus grandis

<400> 33
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<210> 34

<211> 1274

<212> DNA

<213> Eucalyptus grandis

<400> 34
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<210> 35

<211> 795

<212> DNA

<213> Eucalyptus grandis

<400> 35
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ataatcagca atgct 795

<210> 36

<211> 1200
 <212> DNA
 <213> Eucalyptus grandis

<400> 36

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gcattcaaat	acgtacgccg	tactcgattc	ccattcgatt	gttcattcat	ccgcatgcaa	180
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gtgcgccacc	tccttctccc	ctgcccattc	ctcgtctcaag	agagccgccg	gcctacggcc	780
ctctctctcc	gcccgcctcg	gcccttctct	ctcctctctc	tccgtctctc	ctccgaccct	840
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gggggacctg	aaagccacag	cagccgcaaa	agtggagcaa	ataactgcgg	agttgcaaac	1020
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cttcaagaag	gagaaatacg	acaagaaccc	tgttttatat	ggtgaactgg	caaagcagag	1140
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<210> 37
 <211> 648
 <212> DNA
 <213> Eucalyptus grandis

<400> 37

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gttctattta	tggggcgaaa	caggggaggg	gaaaccgaat	ttaccaagat	gcccttcttg	180
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tacacatgca	atcgtcggcg	aaccgacctt	atccgaccgg	ttccaagctt	gtcctggtaa	300
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gttcacataa	tatttgcccc	ggttttcagg	tcaatttttg	agtagcccg	ttcggttcta	420
gtcccgtctc	cgattcaaaa	attcattggg	aacaaatctt	gacactgtct	ggtatttttg	480
gtctaagacc	ctaccaattt	ttagaactgt	acacccttgc	tttatcccaa	aataaaattg	540
tcaattagtc	aacttttcac	acttgatgat	cgattaagta	gatggatgac	atggtctttt	600
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<210> 38
 <211> 288
 <212> DNA
 <213> Eucalyptus grandis

<400> 38

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aaggctctga	tcatcgga	gaagagcaag	gtcctgatca	tcggagagaa	gagcagggtc	180
cttatcatcg	gagaatcgaa	ttcccgcggc	cgccatggcg	gccgggagca	tgcgacgtcg	240
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<210> 39

<211> 382
 <212> DNA
 <213> Eucalyptus grandis

<400> 39
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 tttaaggtag atccatattt cgcagatggc catgttactg ctacactctc ttcacagcat 180
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 ccagcccggg ccgtcgacca cgcgtgccct atagtagtag tggggaagga gtgagaggag 300
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 atgccgatgg tggccactcc ag 382

<210> 40
 <211> 986
 <212> DNA
 <213> Eucalyptus grandis

<400> 40
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 gtgctagatg gtatagagtc cctagttatt atttattttt ttggggccga gaagatcctg 180
 atggatctat gctgtttgat actttcagat ttgttttgtc tacagctcaa ataaattagt 240
 gcttggggtt tgatatatta tctaactctga tacaagtctt tgccttgcc aatttttgca 300
 gagtttcctg caaaacagtg cactaaagct tccagaggac ctcattgcat gcccaagggc 360
 accacctatg atggaacgga gaatcaaacc acagactgaa caggcgttga aatgccccag 420
 atgtgattct acaaacacaa aattctgtta ctataacaac tacaatcttt cacaacctcg 480
 ccattttctgc aagacctgca ggcgatactg gaccaaagga ggtgccttac gtaacgttcc 540
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 tgctcagaat gaagcatcca cctctgcagc cccaggcaac gaagtacctg accggtctcc 660
 ctttgagcca ccattctcaa aatccattta ctatggggga gaaaacatga acttaaccgg 720
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 ctttctagga atgtcatgtg gcacccaatc ggctctctcg gaaccacatc tttcggtttt 840
 aaatacatct aattcattca agtctaaca tcttggtctg gatcttccta gcttaagcac 900
 agaccagaat tcaactgttg agaccagcca gccacaactg tcaagagcaa tggcatctgc 960
 ctttttttct atgccaatgg ctctcg 986

<210> 41
 <211> 313
 <212> DNA
 <213> Pinus radiata

<400> 41
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 tagaaaatgg acggcagttt atcctttcat ggctggacac acagaatttg tggagggact 180
 ctccattctg gtttatccgc cgtttagttc ctctgtactc cacccttagt tctctttgta 240
 ctcgagacct ttaatgatta gccctgctta tgctgtcatt actgaactca cttccagagc 300
 cccaaaaatc tct 313

<210> 42
 <211> 713
 <212> DNA
 <213> Pinus radiata

<400> 42
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gaataacatc	ggggccttgt	tctagacaga	gatttttcac	aaataacagg	ttcgaaggta	180
tgtgtagaca	tctgggtagt	tgtagaataa	agacggagcc	cattaggtga	tccaatcgaa	240
gagctcagat	gggaaaacag	ataaaaatta	tcgggtggac	cttccttcac	atgttaatta	300
tatatcaagt	gtcgccaatc	cttatgtgaa	acatttagta	aagcttcgcc	agagcacttc	360
ttataggcat	tctgtgggct	ctgttggtgt	ggttggaagt	actcctttaa	gggaggtatc	420
tgaatatttg	caacagaagt	cagttaaaca	agtgggtgac	tgtctgtttg	tacaagatgt	480
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ggtgatgcag	aagctagccg	gagtagagtc	tatagagccc	actgaagcaa	ttggtgtaat	600
caagcttcct	agcagcttct	acaacttgga	atctcttgaa	attcactcta	gttcccagat	660
atggtgctcg	tcgccacatc	gtctgcttgt	acttgatggc	attcaggatc	ctg	713

<210> 43

<211> 28

<212> DNA

<213> Pinus radiata

<400> 43

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<210> 44

<211> 35

<212> DNA

<213> Pinus radiata

<400> 44

gctgtttcat	tggggtcata	gctacgtggg	gctga	35
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<210> 45

<211> 1729

<212> DNA

<213> Pinus radiata

<400> 45

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tctgtaatta	cgaatttagg	gtttcctctg	tcaatatctg	gtagtgcaca	acaaggttta	180
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gagcttcgtg	tcttgcaacc	aattttccag	atatatggtc	gacgtcgagc	tttctctgga	300
cctatagtta	caactgaagg	ctttgaggac	aatgtccttt	tgcggaatt	ccttgaggag	360
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gggggcaatg	tagttgtatc	tgcccaaaac	aatgggttgg	ctggaataat	tgtcactggc	480
tgcataaggg	acgttgatga	aataaacaga	tgtgacattg	gtataagagc	actgacatct	540
aaccctactga	aggccaacaa	gaagggtgtg	ggtgaaaaac	atgcgcctat	ttacattgct	600
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tcctgtggaa	catatatttg	actcgagtta	gattctaata	ggattaattg	atagattctg	780
aaaattgagg	aatatctctg	gtcatgaaaa	tcttcttctc	atgtgatctt	ttatgctcag	840
ctttgagtac	aggatgataa	gaagtttgtg	catgtttgtc	taaaggttta	gcaagtatta	900
tcggaccatc	ataagagata	gattatggaa	ctcagggact	tgctattttt	aatccaaaat	960
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aacgatagct	agcttgga	gtaggatgat	tacatcaaaa	tcatagcagt	tgagaacata	1620
gttgaagga	gaatccttat	gatggctacg	ttggataata	ggcgtgatta	tcgtaggtag	1680
attagagcac	aagatcaaac	taatagctgg	cgcagctatc	gactatttt		1729

<210> 46

<211> 1038

<212> DNA

<213> Pinus radiata

<400> 46

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tcattcatta	tataagatca	gattcgtatg	atatacaggc	aaccatagaa	acaaccagca	180
aagttactag	caggaaatcc	aactaggtat	catgaagact	accaacgcag	gctcgataat	240
gttgggtgctc	attatTTTTTg	ggtgctgttt	cattgggggtc	atagctacat	cttttgattt	300
ctattacttc	gttcaacagt	ggcctgggtc	atactgcgat	actcgtagag	gatgctgtta	360
ccctcgacg	ggaaggcctg	cttccgaatt	ttccattcat	ggcctctggc	ccaactacaa	420
gaccggtaaa	tggccacagt	tctgtgggtc	ctccgaagaa	ttcgactact	caaagatctc	480
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gcattcatac	tttgagaagg	ctctctcctt	gagacaaaat	atagacattc	ttggggctct	660
taaaactgca	ggtattaaac	ccgatggaag	ccaatacagt	ttgagcgata	tcaaggaagc	720
cattaatacaa	aacactgggc	agctcccagg	aatcgattgc	aacacgagcg	cagagggaga	780
gcatcaacta	tatcaggtgt	atgtgtgtgt	tgataaatcc	gatgcttcca	ctgttattga	840
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ggatcaggag	gaccgagatg	gttacacaga	aggaatgtac	gagctgtaga	tctggacaaa	960
cagcatttct	tctctccgca	tttgattttt	atcaatgaaa	tttccgattc	caacattttg	1020
taaaaaaaaa	aaaaaaaaa					1038

<210> 47

<211> 91

<212> DNA

<213> Pinus radiata

<400> 47

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tcctccgaag	aattcgatat	caagcttattc	g			91

<210> 48

<211> 91

<212> DNA

<213> Pinus radiata

<400> 48

gcttttcatc	cacactgggtg	cttcattcat	tatataagat	cagattcgtg	tgatatacag	60
gcaaccatag	aaacaaccgg	caaagttact	a			91

<210> 49

<211> 809

<212> DNA

<213> Pinus radiata

<400> 49

tgatatatat	aacttctagc	agaatgacac	gcgacttgta	tatctttttca	ttttttaacc	60
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catgaaaacc	gattagggta	ttgcaaatta	gggcattgcc	attcaaataa	ttctcagatg	120
aaagattctc	tctaacaatt	acaaatgatt	atTTTTTtcc	atgagtgttg	catgttcgaa	180
cggctctgcc	agtctgtgag	agagcataga	gaaccctccc	tgcccaattt	gtagagcat	240
agagaaccct	actgcatgag	tagtaagaaa	aatattcggg	ctcaattcgg	caaagaccac	300
ctcgaatgga	tgacttcaac	gacaatctca	tgatagtgtt	ctgatcagca	ccagttcacc	360
tatatatttt	atctaggggt	tagtttgcat	gtatcaatcc	tctgggtgcac	taggtaattc	420
tttcccagta	tcatatatcc	ttaataactgt	tttgtctttt	aatccatggc	taccatcaga	480
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ggccctcctt	ttccaggggt	cgaccgcggc	ctcgcaatgc	agctgcctgc	caaatgccat	780
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<210> 50

<211> 428

<212> DNA

<213> *Eucalyptus grandis*

<400> 50

tttcttgtga	ctattcattt	tcctcctgat	tatccattca	agcccccgaa	ggttgcattt	60
aggactaaag	ttttccaccc	aaatataaat	aacaatggaa	gtatctgcct	tgacatcttg	120
aaggaacagt	ggagtctgc	tttgacaatc	tccaaggttt	tgctctcaat	ttgctctttg	180
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gatagggggc	aatatgagtc	cactgcacgg	agttggactc	agaaatatgc	aatggggttaa	300
ctttaaaaac	tatatatcag	tgatggaaact	ttatccctaa	gttggaatct	cttcgaatca	360
atgacttggt	tgcttgtaag	aaatgtttcc	ttaagataag	tggttttctt	caaaacttga	420
ttgaagtg						428

<210> 51

<211> 525

<212> DNA

<213> *Pinus radiata*

<400> 51

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agcgcaggct	caagattgct	caaagccat	ggacaaattg	gctccatgca	cttcagcagt	180
gggactgtct	agcaatggag	tgaagccctc	atctgagtgc	tgtgatgccc	tcaaaggaac	240
cagtactggc	tgcgtctgca	agtctgtgag	agcagtgata	tcacttctctg	ctaagtgcaa	300
tctcccagcc	ataacctgct	ctggatctcg	ctgaaggctc	tctgttatgg	cgattctcag	360
atcgtggatc	tctttaagat	tttcagcaag	caagtgatag	aataaattct	cagattttga	420
gatattctata	tagcgatttt	cagtatcaga	ttgtctatag	tactcatata	tttaagtgat	480
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<210> 52

<211> 1126

<212> DNA

<213> *Pinus radiata*

<400> 52

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aagacatata	taaacacctg	cacctaaaag	ttataatgat	aacatgcata	caaccctaca	180
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ccagaagtta	taataataac	atacatagaa	cccttacaat	aaaaaaagtt	atctccaatg	300
attattaatc	tactgcaggc	cagccatact	cagcttgaac	gtgaaaattc	gcattgtaag	360

catggcgcca	cattaaaata	acctcggcaa	tattttcatg	tccaagtggc	cggccagcca	420
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aaatgtggcc	aacccaagca	ccatatccat	gttcattaat	ccccctcttg	ccttcaacta	540
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aatcggctgc	acttttctgc	atactgctca	tagttgcggc	agtacaggct	gaagattgct	660
caaatgccat	ggacaaaattg	gctccatgca	cttcagcagt	gggactgtct	agcaatggag	720
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tgagatagaa	atataggcac	agaatgtggc	cggaggaatg	ttcgaattcg	agaatgataa	1080
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<210> 53

<211> 454

<212> DNA

<213> Pinus radiata

<400> 53

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caaatgccat	ggacaaaattg	gctccatgca	cttcagcagt	gggactgtct	agcaatggag	180
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agtctgtgag	agcagtgata	tcacttcctg	ctaagtgcaa	tctcccagcc	ataacctgct	300
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tttcagcaag	tgatagaata	aattctcaga	ttttgagata	tctatatagc	gatttttcagt	420
atcagattgt	ctatagtact	catatatatta	agtg			454

<210> 54

<211> 335

<212> DNA

<213> Pinus radiata

<400> 54

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catttatattc	taatgcagtt	gtttgttaat	tgaagtgcaa	atagttccaa	aatgtttaca	180
tgaatcaata	gtgaacaaat	ccctctgttt	tatatcatat	tgatggatta	ttcgattttt	240
tggtgacgtg	gcgcgaaact	gcttttcgaa	ctcatggaaa	tagtaattgt	tataatccat	300
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<210> 55

<211> 336

<212> DNA

<213> Pinus radiata

<400> 55

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atataaaaaca	gagggatttg	ttcactattg	attcatgtaa	acattttgga	actatttgca	180
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acttccaaat	aactacaggg	caataatcct	tgcagactag	ggcttatcta	taagctcatg	300
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<210> 56

<211> 532

<212> DNA

<213> *Pinus radiata*

<400> 56

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ccatttgaag	ttctttttct	gagagaagaa	tttagacatg	gctgatcgca	tggtgactcg	180
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tgctgagttt	gaggccatct	ctgaggagag	cagagcaaag	cttcttgatg	gggcctttgg	360
tgaagtcttc	aaatccactc	aggaagcgat	tgtgtcgcct	ccatgggttg	ctcttgctgt	420
tcgtccaagg	ccgggcgtgt	gggagcacat	ccgtgtgaac	gtccatgcgc	ttgttcttga	480
gcaattggag	gttgctgagt	atctgcactt	caaagaagag	cttgctgatg	ga	532

<210> 57

<211> 3103

<212> DNA

<213> *Eucalyptus grandis*

<400> 57

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<210> 58

<211> 326

<212> DNA

<213> Eucalyptus grandis

<400> 58

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ggatctgatt	ggccgcgacg	tccgcctctg	acgtggcacc	accgacgatt	tttttttaat	180
atcttggtca	agtcctaatt	taactatggg	gtccagatta	gaagcttatc	cactatggat	240
taaatattaa	caaatgggaa	ttaaatataa	ttaaaatcat	cgtgcggagg	tgacagagat	300
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<210> 59

<211> 311

<212> DNA

<213> Eucalyptus grandis

<400> 59

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gcgaagggct	gacaagggat	tggatcatgtc	accctcacca	aagggtgccg	aagggtccgg	180
gacctcagct	gacggccacc	tacaccaa	ctagctcact	agcagcctaa	gcccttcac	240
aactctagtg	aaagggtttg	agtatttttt	aataaaaaat	atttaaaaaa	tatatagcga	300
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<210> 60

<211> 2096

<212> DNA

<213> Eucalyptus grandis

<400> 60

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agtaaccaat	gatgcatcat	gttgacaaaa	aggctgatta	gtatgatctt	ggagttgttg	180
gtgcaaattt	gcaagctgac	gatggccctt	cagggaatt	aaggcgccaa	cccagattgc	240
aaagagcaca	aagagcacga	tccaaccttt	ccttaacaag	atcatcacca	gatcggccag	300
taagggtaat	attaatttaa	caaataagctc	ttgtaccggg	aactccgtat	ttctctcact	360
tccataaacc	cctgattaat	ttgggtggaa	agcgacagcc	aaccacaaaa	aggctcagatg	420
tcatcccacg	agagagagag	agagagagag	agagagagag	agagttttct	ctctatattc	480
tggttcaccg	gttgagtgca	atggcatgcg	tgacgaatgt	acatattggg	gtaggggtcca	540

atattttg	cg	ggaggg	ttgg	tgaacc	gcaa	agttcct	tata	tatcga	acct	ccaccac	cat	600
acctcact	tc	aatcccc	cacc	atztat	cctg	tttattt	cct	ctgcttt	cct	ttgctcg	agt	660
ctcgcg	gaag	agagaga	aga	gaggag	agga	gagaat	gggt	tcgacc	ggat	ccgagac	cca	720
gatgac	cccc	accca	agtct	cggac	gagga	ggcga	acctc	ttcgcc	atgc	agctgg	cgag	780
cgctcc	gctg	ctcccc	atgg	tcctca	aggc	cgccat	cgag	ctcgac	ctcc	tcgagat	cat	840
ggcca	aggcc	gggccc	ggcg	cgttc	ctctc	cccg	ggggaa	gtcgc	ggccc	agctccc	gac	900
ccaga	acccc	gaggcac	ccg	tcattg	ctcga	ccgga	ctctc	cggctg	ctgg	ccagct	actc	960
cgtgct	cacg	tgcacct	cc	gcgac	ctccc	cgatgg	caag	gtcga	gcggc	tctac	ggtt	1020
agcgcc	gggtg	tgcaagt	ttct	tggtca	agaa	cgaggac	ggg	gtctcc	atcg	ccgcact	caa	1080

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tgaagg	cgga	atcccat	tca	acaagg	cgta	cgggat	gacc	gcgttc	cgagt	atcatg	gcac	1200
cgaccc	gcga	ttcaaca	aga	tcttta	accg	gggaat	gtct	gatcact	cca	ccattac	tactat	1260
gaaga	agata	ctgga	aacat	acaagg	gctt	cgaggg	cctc	gagacc	ggtg	tcgatg	tcgg	1320
aggcg	gact	ggggc	cg	tcagc	atgat	cgttg	ccaaa	tacccat	caa	tgaaagg	gat	1380
caactt	cgac	cgcccc	aacg	gattga	agac	gcccc	acccc	ttcctg	ggtgt	caagcac	gtc	1440
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catgact	gga	gtgac	gacca	ttgcg	cgaag	ttcctc	aaaga	actgct	acga	tgcgct	tccc	1560
aacaat	ggaa	aggtg	atcgt	tgca	gagtgc	gtactc	ccctg	tgtacc	ccaga	cacgag	ccta	1620
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cctctg	tgtgt	gatgtt	catg	gttctt	ggat	ttgaa	aggtc	gtgaag	gagc	cctttt	ctca	1860
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gatggc	gcaa	gtgga	agtta	caagatt	tgt	gtttt	atgt	ctataa	agtt	ttgagt	cttc	1980
tgcatact	gga	tttcac	agaa	tgtgt	aacga	aacgg	cgtat	atggat	gtgc	ctgaat	gatg	2040
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<210> 61
 <211> 522
 <212> DNA
 <213> Eucalyptus grandis

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ggaga	agatt	cacatc	agca	ttgtgg	tcat	tggcc	atgtc	gattct	ggga	agtca	accac	180
aactgg	ccac	ttgat	ataca	agctcg	gagg	aatcg	acaag	cggtg	gattg	agagatt	tcga	240
gaagga	agct	gctga	gatga	acaag	agatc	gttca	agtat	gcttg	gggtgc	ttgaca	agct	300
caaggc	cgag	cgcga	gcgcg	gtatt	accat	tgat	attgcc	ttgtg	gaagt	tcgag	accac	360
caagtac	tact	tgca	ctgtca	ttgat	gtctc	tggac	atcgt	gacttt	atta	agaat	atgat	420
tactgga	acc	tcccag	gccg	actgt	gctgt	ccttat	catt	gattcc	acca	ctggt	ggttt	480
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<210> 62
 <211> 420
 <212> DNA
 <213> Eucalyptus grandis

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agggca	attc	tgttt	ctcta	gtgtaa	ataa	gggtg	tatt	aataat	tgag	ggatgg	aaat	180
agcatg	gtca	ctcggt	aat	atcaag	gaaa	gcaaga	ataa	aaatgg	aaaaa	aaaaaaaa		240
aaagct	tgaa	gaggcca	atg	tcgaa	attat	gagcgc	gaga	tgagg	acact	cctggg	aaac	300
gaaaaa	tggc	attcgc	gggg	ggtg	ctatat	aaagc	ctcgt	gtaagg	gtgc	gttcct	cact	360
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<210> 63
 <211> 65
 <212> PRT
 <213> Eucalyptus grandis

<400> 63

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Thr	Gln	Glu	Lys	Ser	Asn	Gln	Met	Met	Asp	Lys	Ala	Ser	Asn	Thr	Ala
			20					25					30		
Gln	Ser	Ala	Arg	Asp	Ser	Met	Gln	Glu	Thr	Gly	Gln	Gln	Met	Lys	Ala
		35					40					45			
Lys	Ala	Gln	Gly	Ala	Ala	Asp	Ala	Val	Lys	Asn	Ala	Thr	Gly	Met	Asn
	50					55					60				

Lys
 65

<210> 64
 <211> 152
 <212> PRT
 <213> Eucalyptus grandis

<400> 64

Met	Gly	Gly	Pro	Leu	Thr	Leu	Asp	Ala	Glu	Val	Glu	Val	Lys	Ser	Pro
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Ala	Asp	Lys	Phe	Trp	Val	Ser	Val	Arg	Asp	Ser	Thr	Lys	Leu	Phe	Pro
			20					25					30		
Lys	Ile	Phe	Pro	Asp	Gln	Tyr	Lys	Asn	Ile	Glu	Val	Leu	Glu	Gly	Asp
		35					40					45			
Gly	Lys	Ala	Pro	Gly	Ser	Val	Arg	Leu	Phe	Thr	Tyr	Gly	Glu	Gly	Ser
	50					55					60				
Pro	Leu	Val	Lys	Val	Ser	Lys	Glu	Lys	Ile	Asp	Gly	Val	Asp	Glu	Ala
65					70					75				80	
Asp	Lys	Val	Val	Thr	Tyr	Ser	Val	Ile	Asp	Gly	Asp	Leu	Leu	Lys	Tyr
				85					90					95	
Tyr	Lys	Asn	Phe	Asn	Gly	Ser	Ile	Lys	Val	Ile	Pro	Lys	Gly	Asp	Gly
		100						105					110		
Ser	Leu	Val	Lys	Trp	Ser	Cys	Gly	Phe	Glu	Lys	Ala	Ser	Asp	Glu	Ile
	115						120					125			
Pro	Asp	Pro	His	Val	Ile	Lys	Asp	Phe	Ala	Ile	Gln	Asn	Phe	Lys	Glu
	130					135					140				

Leu Asp Glu Phe Ile Leu Lys Ala
 145 150

<210> 65
 <211> 117
 <212> PRT
 <213> Eucalyptus grandis

<400> 65

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Arg	Glu	His	Gly	Asn	Val	Ala	Asp	Val	Leu	Gly	Leu	Asp	Pro	Glu	Leu
			20					25					30		
Lys	Val	Pro	Glu	Leu	Gln	Glu	Gly	Gln	Val	Leu	Val	Lys	Val	Leu	Ala
		35					40					45			

Ala	Ala	Leu	Asn	Pro	Val	Asp	Ala	Ala	Arg	Met	Lys	Gly	Val	Ile	Lys
50						55					60				
Leu	Pro	Gly	Phe	Ser	Leu	Pro	Ala	Val	Pro	Gly	Tyr	Asp	Leu	Ala	Gly
65					70					75					80
Val	Val	Val	Lys	Val	Gly	Arg	Glu	Val	Lys	Glu	Leu	Lys	Ile	Gly	Asp
				85					90					95	
Glu	Val	Tyr	Gly	Phe	Met	Phe	His	Ala	Lys	Lys	Asp	Gly	Thr	Leu	Ala
			100					105					110		
Glu	Tyr	Ala	Ala	Val											
			115												

<210> 66

<211> 318

<212> PRT

<213> Eucalyptus grandis

<400> 66

Met	Ala	Ala	Asn	Phe	Val	Ile	Pro	Thr	Lys	Met	Lys	Ala	Trp	Val	Tyr
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Arg	Glu	His	Gly	Asp	Val	Ala	Asn	Val	Leu	Gly	Leu	Asp	Pro	Glu	Leu
			20					25					30		
Lys	Val	Pro	Glu	Leu	Gln	Glu	Gly	Gln	Val	Leu	Val	Lys	Val	Leu	Ala
		35					40					45			
Ala	Ala	Leu	Asn	Pro	Ile	Asp	Thr	Ala	Arg	Val	Lys	Gly	Val	Ile	Lys
		50				55					60				
Leu	Pro	Gly	Phe	Ser	Leu	Pro	Ala	Val	Pro	Gly	Tyr	Asp	Leu	Ala	Gly
65					70					75					80
Val	Val	Val	Lys	Val	Gly	Arg	Glu	Val	Lys	Glu	Leu	Lys	Val	Gly	Asp
				85					90					95	
Glu	Val	Tyr	Gly	Phe	Met	Phe	His	Ala	Lys	Lys	Asp	Gly	Thr	Leu	Ala
			100					105					110		
Glu	Tyr	Ala	Ala	Val	Glu	Glu	Ser	Phe	Leu	Ala	Leu	Lys	Pro	Lys	Lys
		115					120					125			
Leu	Arg	Phe	Gly	Glu	Ala	Ala	Ser	Leu	Pro	Val	Val	Ile	Gln	Thr	Ala
		130				135					140				
Tyr	Gly	Gly	Leu	Glu	Arg	Ala	Gly	Leu	Ser	His	Gly	Lys	Ser	Leu	Leu
145					150					155					160
Val	Leu	Gly	Gly	Ala	Gly	Gly	Val	Gly	Thr	Leu	Ile	Ile	Gln	Leu	Ala
			165						170					175	
Lys	Glu	Val	Phe	Gly	Ala	Ser	Arg	Val	Ala	Ala	Thr	Ser	Ser	Thr	Gly
			180					185					190		
Lys	Leu	Glu	Leu	Leu	Lys	Ser	Leu	Gly	Ala	Asp	Leu	Ala	Ile	Asp	Tyr
		195					200					205			
Thr	Lys	Val	Asn	Phe	Glu	Asp	Leu	Pro	Glu	Lys	Phe	Asp	Val	Val	Tyr
		210				215					220				
Asp	Thr	Val	Gly	Glu	Ile	Glu	Arg	Ala	Ala	Lys	Ala	Val	Lys	Pro	Gly
225					230					235					240
Gly	Ser	Ile	Val	Thr	Ile	Val	Lys	Gln	Asn	Lys	Thr	Leu	Pro	Pro	Pro
				245					250					255	
Ala	Phe	Phe	Phe	Ala	Val	Thr	Ser	Asn	Arg	Ser	Thr	Leu	Glu	Lys	Leu
			260					265					270		
Lys	Pro	Phe	Leu	Glu	Ser	Gly	Lys	Val	Lys	Pro	Val	Ile	Asp	Pro	Lys
		275					280					285			
Ser	Pro	Phe	Pro	Phe	Ser	Gln	Ala	Ile	Glu	Ala	Phe	Ser	Tyr	Leu	Gln
		290				295					300				
Thr	Arg	Arg	Ala	Thr	Gly	Lys	Leu	Val	Ile	His	Pro	Val	Pro		
305					310					315					

<210> 67
 <211> 156
 <212> PRT
 <213> Eucalyptus grandis

<400> 67

Met	Gln	Ile	Phe	Val	Lys	Thr	Leu	Thr	Gly	Lys	Thr	Ile	Thr	Leu	Glu
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Val	Glu	Ser	Ser	Asp	Thr	Val	Asp	Asn	Val	Lys	Ala	Lys	Ile	Gln	Asp
			20					25					30		
Lys	Glu	Gly	Ile	Pro	Pro	Asp	Gln	Gln	Arg	Leu	Ile	Phe	Ala	Gly	Lys
		35					40					45			
Gln	Leu	Glu	Asp	Gly	Arg	Thr	Leu	Ala	Asp	Tyr	Asn	Ile	Gln	Lys	Glu
	50					55					60				
Ser	Thr	Leu	His	Leu	Val	Leu	Arg	Leu	Arg	Gly	Gly	Met	Gln	Ile	Phe
65					70					75					80
Val	Lys	Thr	Leu	Thr	Gly	Lys	Thr	Ile	Thr	Leu	Glu	Val	Glu	Ser	Ser
				85					90					95	
Asp	Thr	Val	Asp	Asn	Val	Lys	Ala	Lys	Ile	Gln	Asp	Lys	Glu	Gly	Ile
			100					105					110		
Pro	Pro	Asp	Gln	Gln	Arg	Leu	Ile	Phe	Ala	Gly	Lys	Gln	Leu	Glu	Asp
		115				120						125			
Gly	Arg	Thr	Leu	Ala	Asp	Tyr	Asn	Ile	Gln	Lys	Glu	Ser	Thr	Leu	His
	130					135					140				
Leu	Val	Leu	Arg	Leu	Lys	Gly	Gly	Met	Gln	Ile	Phe				
145					150					155					

<210> 68
 <211> 238
 <212> PRT
 <213> Eucalyptus grandis

<400> 68

Met	Ala	Thr	His	Ala	Ala	Leu	Ala	Pro	Ser	Thr	Leu	Pro	Ala	Asn	Ala
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Lys	Phe	Ser	Ser	Lys	Ser	Ser	Ser	His	Ser	Phe	Pro	Thr	Gln	Cys	Phe
			20					25					30		
Ser	Lys	Arg	Leu	Glu	Val	Ala	Glu	Phe	Ser	Gly	Leu	Arg	Ala	Gly	Ser
		35					40					45			
Cys	Val	Thr	Tyr	Ala	Lys	Asn	Ala	Gly	Glu	Gly	Ser	Phe	Phe	Asp	Ala
	50					55					60				
Val	Ala	Ala	Gln	Leu	Thr	Pro	Lys	Thr	Ser	Ala	Pro	Ala	Pro	Ala	Lys
65					70					75					80
Gly	Glu	Thr	Val	Ala	Lys	Leu	Lys	Val	Ala	Ile	Asn	Gly	Phe	Gly	Arg
				85					90					95	
Ile	Gly	Arg	Asn	Phe	Leu	Arg	Cys	Trp	His	Gly	Arg	Lys	Asn	Ser	Pro
			100					105					110		
Leu	Asp	Val	Ile	Val	Val	Asn	Asp	Ser	Gly	Gly	Val	Lys	Asn	Ala	Ser
		115				120						125			
His	Leu	Leu	Lys	Tyr	Asp	Ser	Met	Leu	Gly	Thr	Phe	Lys	Ala	Asp	Val
	130					135					140				
Lys	Ile	Val	Asp	Asn	Glu	Thr	Ile	Ser	Val	Asp	Gly	Lys	Pro	Val	Lys
145					150					155					160
Val	Val	Ser	Asn	Arg	Asp	Pro	Leu	Lys	Leu	Pro	Trp	Ala	Glu	Leu	Gly
			165						170					175	
Ile	Asp	Ile	Val	Ile	Glu	Gly	Thr	Gly	Val	Phe	Val	Asp	Gly	Pro	Gly

			180					185				190			
Ala	Gly	Lys	His	Ile	Gln	Ala	Gly	Ala	Lys	Lys	Val	Ile	Ile	Thr	Ala
		195					200					205			
Pro	Ala	Lys	Gly	Ala	Asp	Ile	Pro	Thr	Tyr	Val	Tyr	Gly	Val	Asn	Glu
	210					215					220				
Thr	Asp	Tyr	Ser	His	Glu	Val	Ala	Asn	Ile	Ile	Ser	Asn	Ala		
225					230					235					

<210> 69

<211> 168

<212> PRT

<213> Eucalyptus grandis

<400> 69

Met	Ser	Thr	Ser	Pro	Val	Ser	Ser	Trp	Cys	Ala	Thr	Ser	Phe	Ser	Pro
1				5					10					15	
Ala	His	Ser	Ser	Leu	Lys	Arg	Ala	Ala	Gly	Leu	Arg	Pro	Ser	Leu	Ser
			20					25					30		
Ala	Arg	Leu	Gly	Pro	Ser	Ser	Ser	Ser	Ser	Ser	Val	Ser	Pro	Pro	Thr
		35					40					45			
Leu	Ile	Arg	Asn	Glu	Pro	Val	Phe	Ala	Ala	Pro	Ala	Pro	Val	Ile	Asn
	50					55					60				
Pro	Thr	Trp	Thr	Glu	Glu	Met	Gly	Lys	Asp	Tyr	Asp	Glu	Ala	Ile	Glu
65					70					75					80
Ala	Leu	Lys	Lys	Leu	Ser	Glu	Lys	Gly	Asp	Leu	Lys	Ala	Thr	Ala	
				85				90						95	
Ala	Ala	Lys	Val	Glu	Gln	Ile	Thr	Ala	Glu	Leu	Gln	Thr	Ala	Ser	Pro
			100					105					110		
Asp	Ile	Lys	Pro	Ser	Ser	Ser	Val	Asp	Arg	Ile	Lys	Thr	Gly	Phe	Thr
		115					120					125			
Phe	Phe	Lys	Lys	Glu	Lys	Tyr	Asp	Lys	Asn	Pro	Ala	Leu	Tyr	Gly	Glu
	130					135					140				
Leu	Ala	Lys	Gln	Ser	Pro	Lys	Phe	Met	Val	Phe	Ala	Cys	Ser	Asp	Ser
145					150					155					160
Arg	Val	Cys	Pro	Ser	His	Val	Leu								
				165											

<210> 70

<211> 214

<212> PRT

<213> Eucalyptus grandis

<400> 70

Met	Pro	Cys	Pro	Arg	Ala	Pro	Pro	Met	Met	Glu	Arg	Arg	Ile	Lys	Pro
1				5					10					15	
Gln	Thr	Glu	Gln	Ala	Leu	Lys	Cys	Pro	Arg	Cys	Asp	Ser	Thr	Asn	Thr
			20					25					30		
Lys	Phe	Cys	Tyr	Tyr	Asn	Asn	Tyr	Asn	Leu	Ser	Gln	Pro	Arg	His	Phe
		35					40					45			
Cys	Lys	Thr	Cys	Arg	Arg	Tyr	Trp	Thr	Lys	Gly	Gly	Ala	Leu	Arg	Asn
		50				55					60				
Val	Pro	Val	Gly	Gly	Gly	Cys	Arg	Lys	Asn	Lys	Arg	Ala	Lys	Arg	Ala
65					70					75					80
Val	Asp	His	Pro	Val	Ser	Ala	Gln	Asn	Glu	Ala	Ser	Thr	Ser	Ala	Ala
				85					90					95	
Pro	Gly	Asn	Glu	Val	Pro	Asp	Arg	Ser	Pro	Phe	Glu	Pro	Pro	Ser	Ser
			100					105					110		

Lys Ser Ile Tyr Tyr Gly Gly Glu Asn Met Asn Leu Thr Gly Leu Pro
 115 120 125
 Phe Ser Arg Ile Gln Gln Asp Arg Ala Ala Leu Ala His Cys Asn Ser
 130 135 140
 Ser Ser Phe Leu Gly Met Ser Cys Gly Thr Gln Ser Ala Ser Leu Glu
 145 150 155 160
 Pro His Leu Ser Ala Leu Asn Thr Phe Asn Ser Phe Lys Ser Asn Asn
 165 170 175
 Pro Gly Leu Asp Phe Pro Ser Leu Ser Thr Asp Gln Asn Ser Leu Phe
 180 185 190
 Glu Thr Ser Gln Pro Gln Leu Ser Arg Ala Met Ala Ser Ala Leu Phe
 195 200 205
 Ser Met Pro Met Ala Pro
 210

<210> 71
 <211> 166
 <212> PRT
 <213> Pinus radiata

<400> 71
 Met Ala Ala Leu Ala Thr Thr Glu Val Cys Asp Thr Tyr Pro Arg Leu
 1 5 10 15
 Val Glu Asn Gly Glu Leu Arg Val Leu Gln Pro Ile Phe Gln Ile Tyr
 20 25 30
 Gly Arg Arg Arg Ala Phe Ser Gly Pro Ile Val Thr Leu Lys Val Phe
 35 40 45
 Glu Asp Asn Val Leu Leu Arg Glu Phe Leu Glu Glu Arg Gly Asn Gly
 50 55 60
 Arg Val Leu Val Val Asp Gly Gly Gly Ser Leu Arg Cys Ala Ile Leu
 65 70 75 80
 Gly Gly Asn Val Val Val Ser Ala Gln Asn Asn Gly Trp Ser Gly Ile
 85 90 95
 Ile Val Thr Gly Cys Ile Arg Asp Val Asp Glu Ile Asn Arg Cys Asp
 100 105 110
 Ile Gly Ile Arg Ala Leu Thr Ser Asn Pro Leu Lys Ala Asn Lys Lys
 115 120 125
 Gly Val Gly Glu Lys His Ala Pro Ile Tyr Ile Ala Gly Thr Arg Ile
 130 135 140
 Leu Pro Gly Glu Trp Cys Tyr Ala Asp Ser Asp Gly Ile Leu Val Ser
 145 150 155 160
 Gln Gln Glu Leu Ser Leu
 165

<210> 72
 <211> 236
 <212> PRT
 <213> Pinus radiata

<400> 72
 Met Leu Val Leu Ile Ile Phe Gly Cys Cys Phe Ile Gly Val Ile Ala
 1 5 10 15
 Thr Ser Phe Asp Phe Tyr Tyr Phe Val Gln Gln Trp Pro Gly Ser Tyr
 20 25 30
 Cys Asp Thr Arg Arg Gly Cys Cys Tyr Pro Arg Thr Gly Arg Pro Ala
 35 40 45
 Ser Glu Phe Ser Ile His Gly Leu Trp Pro Asn Tyr Lys Thr Gly Lys

50		55		60											
Trp	Pro	Gln	Phe	Cys	Gly	Ser	Ser	Glu	Glu	Phe	Asp	Tyr	Ser	Lys	Ile
65					70					75					80
Ser	Asp	Leu	Glu	Glu	Glu	Leu	Asn	Arg	Tyr	Trp	Gly	Ser	Leu	Ser	Cys
			85						90					95	
Pro	Ser	Ser	Asp	Gly	Gln	Glu	Phe	Trp	Gly	His	Glu	Trp	Glu	Lys	His
			100					105					110		
Gly	Thr	Cys	Ser	Leu	Asn	Leu	Asp	Glu	His	Ser	Tyr	Phe	Glu	Lys	Ala
		115					120					125			
Leu	Ser	Leu	Arg	Gln	Asn	Ile	Asp	Ile	Leu	Gly	Ala	Leu	Lys	Thr	Ala
		130				135					140				
Gly	Ile	Lys	Pro	Asp	Gly	Ser	Gln	Tyr	Ser	Leu	Ser	Asp	Ile	Lys	Glu
145					150					155					160
Ala	Ile	Lys	Gln	Asn	Thr	Gly	Gln	Leu	Pro	Gly	Ile	Asp	Cys	Asn	Thr
			165					170						175	
Ser	Ala	Glu	Gly	Glu	His	Gln	Leu	Tyr	Gln	Val	Tyr	Val	Cys	Val	Asp
			180					185					190		
Lys	Ser	Asp	Ala	Ser	Thr	Val	Ile	Glu	Cys	Pro	Ile	Tyr	Pro	His	Ser
		195				200						205			
Asn	Cys	Pro	Ser	Met	Val	Val	Phe	Pro	Pro	Phe	Gly	Glu	Asp	Gln	Glu
	210					215					220				
Asp	Arg	Asp	Gly	Tyr	Thr	Glu	Gly	Met	Tyr	Glu	Leu				
225					230					235					

<210> 73

<211> 92

<212> PRT

<213> Pinus radiata

<400> 73

Met	Ala	Ala	Pro	Arg	Ser	Ser	Ala	Lys	Leu	Gly	Ala	Leu	Leu	Ala	Ile
1				5					10					15	
Leu	Leu	Ile	Val	Ala	Ala	Ala	Gln	Ala	Gln	Asp	Cys	Ser	Asn	Ala	Met
			20				25						30		
Asp	Lys	Leu	Ala	Pro	Cys	Thr	Ser	Ala	Val	Gly	Leu	Ser	Ser	Asn	Gly
		35				40						45			
Val	Lys	Pro	Ser	Ser	Glu	Cys	Cys	Asp	Ala	Leu	Lys	Gly	Thr	Ser	Thr
	50					55					60				
Gly	Cys	Val	Cys	Lys	Ser	Val	Arg	Ala	Val	Ile	Ser	Leu	Pro	Ala	Lys
65					70					75					80
Cys	Asn	Leu	Pro	Ala	Ile	Thr	Cys	Ser	Gly	Ser	Arg				
				85					90						

<210> 74

<211> 92

<212> PRT

<213> Pinus radiata

<400> 74

Met	Ala	Ala	Pro	Arg	Ser	Ser	Ala	Lys	Ser	Ala	Ala	Leu	Phe	Ala	Ile
1				5					10					15	
Leu	Leu	Ile	Val	Ala	Ala	Val	Gln	Ala	Glu	Asp	Cys	Ser	Asn	Ala	Met
			20				25						30		
Asp	Lys	Leu	Ala	Pro	Cys	Thr	Ser	Ala	Val	Gly	Leu	Ser	Ser	Asn	Gly
		35				40						45			
Val	Lys	Pro	Ser	Ser	Glu	Cys	Cys	Asp	Ala	Leu	Lys	Gly	Thr	Ser	Thr
	50					55					60				

Gly Cys Val Cys Lys Ser Val Arg Ala Val Ile Ser Leu Pro Ala Lys
 65 70 75 80
 Cys Asn Leu Pro Ala Leu Thr Cys Ser Gly Ser Arg
 85 90

<210> 75
 <211> 92
 <212> PRT
 <213> Pinus radiata

<400> 75
 Met Ala Ala Pro Arg Ser Ser Ala Lys Leu Gly Ala Leu Leu Ala Ile
 1 5 10 15
 Leu Leu Ile Val Ala Ala Ala Gln Ala Gln Asp Cys Ser Asn Ala Met
 20 25 30
 Asp Lys Leu Ala Pro Cys Thr Ser Ala Val Gly Leu Ser Ser Asn Gly
 35 40 45
 Val Lys Pro Ser Ser Glu Cys Cys Asp Ala Leu Lys Gly Thr Ser Thr
 50 55 60
 Gly Cys Val Cys Lys Ser Val Arg Ala Val Ile Ser Leu Pro Ala Lys
 65 70 75 80
 Cys Asn Leu Pro Ala Ile Thr Cys Ser Gly Ser Arg
 85 90

<210> 76
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

<400> 76
 Met Ala Asp Arg Met Leu Thr Arg Ser His Ser Leu Arg Glu Arg Leu
 1 5 10 15
 Asp Glu Thr Leu Ser Ala His Arg Asn Asp Ile Val Ala Phe Leu Ser
 20 25 30
 Arg Val Glu Ala Lys Gly Lys Gly Ile Leu Gln Arg His Gln Ile Phe
 35 40 45
 Ala Glu Phe Glu Ala Ile Ser Glu Glu Ser Arg Ala Lys Leu Leu Asp
 50 55 60
 Gly Ala Phe Gly Glu Val Leu Lys Ser Thr Gln Glu Ala Ile Val Ser
 65 70 75 80
 Pro Pro Trp Val Ala Leu Ala Val Arg Pro Arg Pro Gly Val Trp Glu
 85 90 95
 His Ile Arg Val Asn Val His Ala Leu Val Leu Glu Gln Leu Glu Val
 100 105 110
 Ala Glu Tyr Leu His Phe Lys Glu Glu Leu Ala Asp Gly
 115 120 125

<210> 77
 <211> 805
 <212> PRT
 <213> Eucalyptus grandis

<400> 77
 Met Ala Asp Arg Met Leu Thr Arg Ser His Ser Leu Arg Glu Arg Leu
 1 5 10 15
 Asp Glu Thr Leu Ser Ala His Arg Asn Asp Ile Val Ala Phe Leu Ser
 20 25 30

Arg	Val	Glu	Ala	Lys	Gly	Lys	Gly	Ile	Leu	Gln	Arg	His	Gln	Ile	Phe
		35					40					45			
Ala	Glu	Phe	Glu	Ala	Ile	Ser	Glu	Glu	Ser	Arg	Ala	Lys	Leu	Leu	Asp
	50					55					60				
Gly	Ala	Phe	Gly	Glu	Val	Leu	Lys	Ser	Thr	Gln	Glu	Ala	Ile	Val	Ser
65					70					75					80
Pro	Pro	Trp	Val	Ala	Leu	Ala	Val	Arg	Pro	Arg	Pro	Gly	Val	Trp	Glu
				85					90					95	
His	Ile	Arg	Val	Asn	Val	His	Ala	Leu	Val	Leu	Glu	Gln	Leu	Glu	Val
			100					105					110		
Ala	Glu	Tyr	Leu	His	Phe	Lys	Glu	Glu	Leu	Ala	Asp	Gly	Ser	Leu	Asn
		115					120					125			
Gly	Asn	Phe	Val	Leu	Glu	Leu	Asp	Phe	Glu	Pro	Phe	Thr	Ala	Ser	Phe
	130					135					140				
Pro	Arg	Pro	Thr	Leu	Ser	Lys	Ser	Ile	Gly	Asn	Gly	Val	Glu	Phe	Leu
145					150					155					160
Asn	Arg	His	Leu	Ser	Ala	Lys	Leu	Phe	His	Asp	Lys	Glu	Ser	Leu	His
				165					170					175	
Pro	Leu	Leu	Glu	Phe	Leu	Gln	Val	His	Cys	Tyr	Lys	Gly	Lys	Asn	Met
			180					185					190		
Met	Val	Asn	Ala	Arg	Ile	Gln	Asn	Val	Phe	Ser	Leu	Gln	His	Val	Leu
		195					200					205			
Arg	Lys	Ala	Glu	Glu	Tyr	Leu	Thr	Ser	Leu	Lys	Pro	Glu	Thr	Pro	Tyr
	210					215					220				
Ser	Gln	Phe	Glu	His	Lys	Phe	Gln	Glu	Ile	Gly	Leu	Glu	Arg	Gly	Trp
225					230					235					240
Gly	Asp	Thr	Ala	Glu	Arg	Val	Leu	Glu	Met	Ile	Gln	Leu	Leu	Leu	Asp
				245					250					255	
Leu	Leu	Glu	Ala	Pro	Asp	Pro	Cys	Thr	Leu	Glu	Lys	Phe	Leu	Asp	Arg
			260					265					270		
Val	Pro	Met	Val	Phe	Asn	Val	Val	Ile	Met	Ser	Pro	His	Gly	Tyr	Phe
		275					280					285			
Ala	Gln	Asp	Asp	Val	Leu	Gly	Tyr	Pro	Asp	Thr	Gly	Gly	Gln	Val	Val
	290					295					300				
Tyr	Ile	Leu	Asp	Gln	Val	Arg	Ala	Leu	Glu	Glu	Glu	Met	Leu	His	Arg
305					310					315					320
Ile	Lys	Gln	Gln	Gly	Leu	Asp	Ile	Thr	Pro	Arg	Ile	Leu	Ile	Ile	Thr
				325					330					335	
Arg	Leu	Leu	Pro	Asp	Ala	Val	Gly	Thr	Thr	Cys	Gly	Gln	Arg	Leu	Glu
			340					345				350			
Lys	Val	Phe	Gly	Thr	Glu	Tyr	Ser	His	Ile	Leu	Arg	Val	Pro	Phe	Arg
		355					360					365			
Asn	Glu	Lys	Gly	Val	Val	Arg	Lys	Trp	Ile	Ser	Arg	Phe	Glu	Val	Trp
	370					375					380				
Pro	Tyr	Leu	Glu	Arg	Tyr	Thr	Glu	Asp	Val	Ala	Ser	Glu	Leu	Ala	Gly
385					390					395					400
Glu	Leu	Gln	Gly	Lys	Pro	Asp	Leu	Ile	Ile	Gly	Asn	Tyr	Ser	Asp	Gly
				405					410					415	
Asn	Ile	Val	Ala	Ser	Leu	Leu	Ala	His	Lys	Leu	Gly	Val	Thr	Gln	Cys
			420					425					430		
Thr	Ile	Ala	His	Ala	Leu	Glu	Lys	Thr	Lys	Tyr	Pro	Glu	Ser	Asp	Ile
		435					440					445			
Tyr	Trp	Lys	Lys	Phe	Glu	Glu	Lys	Tyr	His	Phe	Ser	Cys	Gln	Phe	Thr
	450					455				460					
Ala	Asp	Leu	Ile	Ala	Met	Asn	His	Thr	Asp	Phe	Ile	Ile	Thr	Ser	Thr
465					470					475					480
Phe	Gln	Glu	Ile	Ala	Gly	Ser	Lys	Asp	Thr	Val	Gly	Gln	Tyr	Glu	Ser

65					70					75				80	
Ile	Phe	Arg	Leu	Leu	Ala	Ser	Tyr	Ser	Val	Leu	Thr	Cys	Thr	Leu	Arg
			85						90					95	
Asp	Leu	Pro	Asp	Gly	Lys	Val	Glu	Arg	Leu	Tyr	Gly	Leu	Ala	Pro	Val
			100					105					110		
Cys	Lys	Phe	Leu	Val	Lys	Asn	Glu	Asp	Gly	Val	Ser	Ile	Ala	Ala	Leu
		115					120					125			
Asn	Leu	Met	Asn	Gln	Asp	Lys	Ile	Leu	Met	Glu	Ser	Trp	Tyr	Tyr	Leu
		130				135					140				
Lys	Asp	Ala	Val	Leu	Glu	Gly	Gly	Ile	Pro	Phe	Asn	Lys	Ala	Tyr	Gly
145					150					155					160
Met	Thr	Ala	Phe	Glu	Tyr	His	Gly	Thr	Asp	Pro	Arg	Phe	Asn	Lys	Ile
			165						170					175	
Phe	Asn	Arg	Gly	Met	Ser	Asp	His	Ser	Thr	Ile	Thr	Met	Lys	Lys	Ile
			180					185					190		
Leu	Glu	Thr	Tyr	Lys	Gly	Phe	Glu	Gly	Leu	Glu	Thr	Val	Val	Asp	Val
		195					200					205			
Gly	Gly	Gly	Thr	Gly	Ala	Val	Leu	Ser	Met	Ile	Val	Ala	Lys	Tyr	Pro
		210				215					220				
Ser	Met	Lys	Gly	Ile	Asn	Phe	Asp	Arg	Pro	Asn	Gly	Leu	Lys	Thr	Pro
225					230					235					240
His	Pro	Phe	Leu	Val	Ser	Ser	Thr	Ser	Glu	Ala	Thr	Cys	Ser	Ser	Ala
			245						250					255	
Phe	Gln	Arg	Glu	Met	Pro	Phe	Ser								
			260												

<210> 79

<211> 136

<212> PRT

<213> Eucalyptus grandis

<400> 79

Met	Gly	Lys	Glu	Lys	Ile	His	Ile	Ser	Ile	Val	Val	Ile	Gly	His	Val
1				5					10					15	
Asp	Ser	Gly	Lys	Ser	Thr	Thr	Thr	Gly	His	Leu	Ile	Tyr	Lys	Leu	Gly
			20					25					30		
Gly	Ile	Asp	Lys	Arg	Val	Ile	Glu	Arg	Phe	Glu	Lys	Glu	Ala	Ala	Glu
		35					40					45			
Met	Asn	Lys	Arg	Ser	Phe	Lys	Tyr	Ala	Trp	Val	Leu	Asp	Lys	Leu	Lys
	50					55					60				
Ala	Glu	Arg	Glu	Arg	Gly	Ile	Thr	Ile	Asp	Ile	Ala	Leu	Trp	Lys	Phe
65					70				75						80
Glu	Thr	Thr	Lys	Tyr	Cys	Thr	Val	Ile	Asp	Ala	Pro	Gly	His	Arg	
			85					90					95		
Asp	Phe	Ile	Lys	Asn	Met	Ile	Thr	Gly	Thr	Ser	Gln	Ala	Asp	Cys	Ala
			100					105					110		
Val	Leu	Ile	Ile	Asp	Ser	Thr	Thr	Gly	Gly	Phe	Glu	Ala	Gly	Ile	Ser
		115					120					125			
Lys	Asp	Gly	Gln	Thr	Arg	Glu	His								
		130				135									

<210> 80

<211> 229

<212> PRT

<213> Eucalyptus grandis

<400> 80

Met	Gln	Ile	Phe	Val	Lys	Thr	Leu	Thr	Gly	Lys	Thr	Ile	Thr	Leu	Glu
1				5					10					15	
Val	Glu	Ser	Ser	Asp	Thr	Ile	Asp	Asn	Val	Lys	Ala	Lys	Ile	Gln	Asp
			20					25					30		
Lys	Glu	Gly	Ile	Pro	Pro	Asp	Gln	Gln	Arg	Leu	Ile	Phe	Ala	Gly	Lys
		35					40					45			
Gln	Leu	Glu	Asp	Gly	Arg	Thr	Leu	Ala	Asp	Tyr	Asn	Ile	Gln	Lys	Glu
	50					55					60				
Ser	Thr	Leu	His	Leu	Val	Leu	Arg	Leu	Arg	Gly	Gly	Met	Gln	Ile	Phe
65					70					75				80	
Val	Lys	Thr	Leu	Thr	Gly	Lys	Thr	Ile	Thr	Leu	Glu	Val	Glu	Ser	Ser
			85						90					95	
Asp	Thr	Ile	Asp	Asn	Val	Lys	Ala	Lys	Ile	Gln	Asp	Lys	Glu	Gly	Ile
			100					105					110		
Pro	Pro	Asp	Gln	Gln	Arg	Leu	Ile	Phe	Ala	Gly	Lys	Gln	Leu	Glu	Asp
		115				120						125			
Gly	Arg	Thr	Leu	Ala	Asp	Tyr	Asn	Ile	Gln	Lys	Glu	Ser	Thr	Leu	His
	130					135						140			
Leu	Val	Leu	Arg	Leu	Arg	Gly	Gly	Met	Gln	Ile	Phe	Val	Lys	Thr	Leu
145					150					155					160
Thr	Gly	Lys	Thr	Ile	Thr	Leu	Glu	Val	Glu	Ser	Ser	Asp	Thr	Ile	Asp
			165						170					175	
Asn	Val	Lys	Ala	Lys	Ile	Gln	Asp	Lys	Glu	Gly	Ile	Pro	Pro	Asp	Gln
			180					185					190		
Gln	Arg	Leu	Ile	Phe	Ala	Gly	Lys	Gln	Leu	Glu	Asp	Gly	Arg	Thr	Leu
		195					200					205			
Ala	Asp	Tyr	Asn	Ile	Gln	Lys	Glu	Ser	Thr	Leu	His	Leu	Val	Leu	Arg
	210					215						220			
Leu	Arg	Gly	Gly	Phe											
225															

<210> 81

<211> 345

<212> DNA

<213> Eucalyptus grandis

<400> 81

taataaaatga	tgaattttatt	ataaacgtat	ccgttttgaga	tttttgtggg	tcataggtgt	60
atcaatttga	aatcttttgat	agtaacaaaa	ataatttttag	gtagtattatg	tttttcatga	120
tataaacctt	gaaagttaat	gtactaaat	tggtatatat	atattaggca	aattacaacc	180
ttaatgcaac	agttaatgac	gtgatactgt	tcagattata	gatacaatgg	ttatccttga	240
atgaataaga	agaagtccta	agggcaagtg	ctatgagctt	gcacgactgc	ttttgcgcca	300
tttttgttta	ccagcccggg	ccgtcgacca	cgcgtgcctt	atagt		345

<210> 82

<211> 72

<212> DNA

<213> Eucalyptus grandis

<400> 82

cagtagggga	cttgttcccc	caagggcacg	tgctgttggt	gaagctctgg	cgggtggatga	60
accgcgtggg	cc					72

<210> 83

<211> 544

<212> DNA

<213> Eucalyptus grandis

<400> 83
actagtgtatt tcgtcgtctt cgtcttcttc gtcttctgga acttcgttgc tccgagcttt 60
atcagaaccg gcgatggaaa tgaaaccctc gttctctctc cctcgtcctt ctctttcttc 120
tatccaggag cgtttgtaca ctgggagtag agagcttctt gcgataccga aactaccctt 180
ggacgactgg cctttttgcc tcgcgcccc tctctgagcc ggggcgcaat ttgtcccttt 240
cccagagcga agtgtcgatt ttgtccttcc acgaggcttt acctactccc atcgcccagag 300
ccccaaagccc aggcccaaat gcctgttctt tgtggccctg ccaacattcc ctttgaaatt 360
aaaaaattaa aaaaaaactc tctgccaggc aaaagtaaag attaacacca ccaaaattta 420
taacaaattt atcattcatt aattttcgtt aaattttatt ttcaaattac tgagtcgaat 480
tacatgtata aattcacgga tgtatcgggt cgagatttta tcctctaatt atcattagt 540
tatg 544

<210> 84

<211> 515

<212> DNA

<213> Eucalyptus grandis

<400> 84
gattactata gggcacgcgt ggtcgacggc cggggctggg ctgccttctt ttaactcccc 60
ttttttgtaa ctttttaaaa tgtagtttta aatttaattt aattactttt tatattaatt 120
atttaccaca tcagagacaa aacaatgtct tttttgtatt ttctagtcac gtcaacatgc 180
aaaacaacgc cattttgcac tcaccttgcc ggaaaattgc cacgtcaaca atttggctag 240
agtggcgctt aagtgatcta ttttgctcca attttggcac ttaagtgtca ttttcctaaa 300
ttttagcaat taaagtattc ctctatgtca agttttgaca cttgggggtgt actttgtcca 360
atcataaacc gtataagttc actttaaaca aaaatggcgc aaaagcagtc gtgcaagctc 420
atagcacttg cccttaggac ttcttcttat tcattcaagg ataaccattg tatctataat 480
ctgaacagta tcacgtcatt aactgttgca ttaag 515

<210> 85

<211> 515

<212> DNA

<213> Eucalyptus grandis

<400> 85
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<211> 782

<212> DNA

<213> Eucalyptus grandis

<400> 86
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<210> 87

<211> 115

<212> PRT

<213> Eucalyptus grandis

<400> 87

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Phe	Leu	Lys	Phe	Tyr	Asp	Thr	Lys	Gly	Ser	Phe	Phe	Gly	Trp	Asn	Gly
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<210> 88

<211> 1521

<212> DNA

<213> Pinus radiata

<400> 88

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<211> 2590

<212> DNA

<213> Eucalyptus grandis

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2590

<210> 90

<211> 1172

<212> DNA

<213> Eucalyptus grandis

<400> 90

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<210> 91

<211> 446

<212> DNA

<213> Eucalyptus grandis

<400> 91

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<210> 92

<211> 2119

<212> DNA

<213> Pinus radiata

<400> 92

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<210> 93

<211> 2571

<212> DNA

<213> *Eucalyptus grandis*

<400> 93

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<210> 94

<211> 1406

<212> DNA

<213> Pinus radiata

<400> 94

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<210> 95

<211> 2546

<212> DNA

<213> Pinus radiata

<400> 95

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<210> 96

<211> 4726

<212> DNA

<213> Pinus radiata

<400> 96

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<210> 97

<211> 635

<212> DNA

<213> Pinus radiata

<400> 97

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<210> 98

<211> 468

<212> DNA

<213> Pinus radiata

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<211> 222

<212> DNA

<213> Pinus radiata

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<210> 100

<211> 597

<212> DNA

<213> Pinus radiata

<400> 100

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<210> 101

<211> 669

<212> DNA

<213> Pinus radiata

<400> 101

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<210> 102

<211> 230

<212> DNA

<213> Pinus radiata

<400> 102

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tgcttttacc	atcagaatca	agcacgaaga	gtaaatatca	cccatgcttt	acaagtgggt	120
tggtagcatt	agcgattccc	ttcaccaa	gaaccctttg	ctggatgatga	gtggacaacc	180
taaagtgtgt	tgctggtgat	gagtggacaa	ccagagtggg	ggttggggaa		230

<210> 103

<211> 596

<212> DNA
 <213> Eucalyptus grandis

<400> 103
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 cagatttgga gaatacatgc catttttaggg ggattttggg gatttcgcat atggcgtcgc 120
 gtcgtcggcg ccttcttctt tacagattgt atcctcccat taaccgcgtg gacctgcact 180
 gtaaccccg aacgggtggg gccaatctcg tctttccgcc tcctccactc agcttcgtgg 240
 aagattaaaa tcctcacctg ccgtgcaaac gccacgtggc gcgttagttt gcgcgtggaa 300
 aggtcctcac gaaccgtaaa gggcaaaaaa aagggaataa aaaaaaggag gaggaggagg 360
 gaggaggaag aattgtccga ttgaaaataa gagtgcgggtg gtgtggtgtg ggtagatctt 420
 gaattgaacg agctcaatcc gcgtatttaa acccgccccg cttcctcatt cttccttgtc 480
 catttcaact ctccctctct cctctctctt tgcctctcga tcgatccagc gatcttctta 540
 tttccggacg cggggagcag ctctctctgt cgaaggttct aaattagtgt ggagag 596

<210> 104
 <211> 653
 <212> DNA
 <213> Eucalyptus grandis

<400> 104
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 tcggcgaccc tcaccaatgc tggggcgagg gtgagcaacc ctcatccaaa tctggagagg 180
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 cgtcaccacc gcactaacc a tgggccacta attttatatt tttcgtgata ttaatcctat 300
 taaaaatgaa aatatctcct taattaatta agcttgtcag gaccgatgta aacaaaatta 360
 atgtaaattg acgcgccttt gacttgccaa caaactcgaa acgacgtttc ctccgtctga 420
 taactatctc gcgacctccg acgacatccg acgggtgcaga tcgggtcccg gtcaaccatc 480
 cagatccacc cgattttctc ccggccctcg acaactccca ccaccacctc tttcctccct 540
 ctttctcttc ttcctttctc accagatttt cccgagaaaa tcacagagag agaaagaaaa 600
 acctcaccgc cttagagagag aaagagagaa agagggaaga gagagagaga gag 653

<210> 105
 <211> 342
 <212> DNA
 <213> Eucalyptus grandis

<400> 105
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 ataggataga attatcttct gtcttgatgg tttccatgag aaccaactgc tatactatga 120
 aaaatatcaa tgttccacaa tatttttggg acaagggaa acagattga gtcaacagtt 180
 caggacccca gaaaaattat tcctgagttc gcagattatt ttcctaaaag tgaacaattc 240
 aagaccctag ccaaatacatt cccaagtcca agttatgtga cactgcgact aacaaggcaa 300
 gttggaagaa accatcaatc aatctcctag ttaatgacag tc 342

<210> 106
 <211> 342
 <212> DNA
 <213> Eucalyptus grandis

<400> 106
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 gtgctggcca aatgcaagtg atgaaatagc tggaccacca agtgcgagg cttcgaaga 120
 acgagggtcg aatttatagt gggcgaagga tgattaggtg gaatatgaca agaaaatagg 180
 tttgaaagag aaataaatat tatgatagt aagggtcttc acatggttag tttgatctgt 240
 ccgagggtgt ccaccctgt ctgatccgca attgctcttg gtcgtgctga atttttagagt 300

gtagccaaag taagaatttt cctttcactg tccggacatt tc

342

<210> 107

<211> 948

<212> DNA

<213> Eucalyptus grandis

<400> 107

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cactttatgt	ttcacctttc	aataatgaat	aacaagggtac	tcgggaaaaa	aaggaaaggg	120
aaattcgcac	aaccaaagtt	gctatgcaga	agtcaactca	atcctaataca	agttgatgag	180
agtgttgggc	cctattttct	gcagcaaaca	tgaatctcga	ttcatctccc	tcgcaaaaga	240
taaggaagct	gcaaaagctt	tcctcctaag	tttgttggca	agcaaattga	ttttgtacca	300
gaaataaata	caaagtgaag	cccaagcaat	cacgcatggc	ctgatttgtg	ccatgtccat	360
ttgatctccc	tctactatct	ttcctgcttt	ctcaagcaaa	ctagtgtgctg	taacagtga	420
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ttgcttttctg	cacaacactt	atcattgagg	tgctaactac	tgaattcccc	taactaaaaa	540
ttggaacctc	tcacctaatt	tcattttctc	ccactttgat	gagcaccact	ctctttccca	600
gatttcaa	aaattgccac	tctctccctc	ctctttcctc	acacaacca	aagccttctt	660
caagtaccac	ttcttctactg	tcctctcttc	acaatcccc	tcttaccag	agcaaagcaa	720
aaaacatgat	gaagagactg	tcattttctgc	tcctactggg	cctgctcttc	caatgctcta	780
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ctacgcctgc	cttaggcccg	gctcctcctg	tcttaggccc	agctcctgca	ggcccaaccg	900
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<210> 108

<211> 362

<212> DNA

<213> Eucalyptus grandis

<400> 108

ccatcactca	taatcaacaa	ggatatctca	tcattgtcttc	caaccaaatt	aaaccccaga	60
catctctaaa	gcagtatgga	aaagaaaaca	gtccggaagt	ctctagctca	aaaactgtaa	120
ccccgaccta	attccggttg	tctctgatta	catcaattct	tatgtcttaa	cactccattc	180
gcacctccac	aataaaataga	tcggcccttc	atctccccct	accatcgaat	ccaatcccaa	240
aaacacttgc	tcagacacca	tcaaattcctt	cgcaaagtct	ttttcttaca	aaaaacaaac	300
gaaagcaacc	atgaagcacc	agttcattgt	tctggctctc	ttattcctca	tcaacacagc	360
cc						362

<210> 109

<211> 326

<212> DNA

<213> Eucalyptus grandis

<400> 109

aaaaattaca	atcaatgggtt	atcaatggat	gttacaaagg	gaggttacat	atagaggtta	60
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attttgacgg	ttctcttgac	tttactatct	caacgattac	tttatttcat	catgttgacg	180
gttgcatcca	tgattgttga	cttcactttt	tgctgattcc	ttcaagctgc	tgattcttca	240
agttgccaat	aatttttattc	ataaatgacg	aaactctagc	ctcatccatt	aagtttgтта	300
cttgtccaca	ataattaaat	tcggta				326

<210> 110

<211> 296

<212> DNA

<213> Pinus radiata

<400> 110
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 ttgttcacac acacgggtct ttatatgacg agtgctgctg cgattataaa tagacggggc 120
 aattacaaca aaaactcaca gcatttgaag gaagttggag tggtagagtg agaaatacac 180
 agcctaattc gaaggaagtt cgagtaatat agtgagaaat ggatcttctt ctctcatga 240
 tgatgcttgt gatgatgggt gtagcaatgc ctactcattc tcaacaaatc actagt 296

<210> 111
 <211> 723
 <212> DNA
 <213> Pinus radiata

<400> 111
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 tcgatgaagt tcccagagat tgcctcgttc aacgtttcct cttttttcgg gtcaagtcgg 120
 gtacagaaga ccactttctt tacgcggtca agacaccgcc attctcgggt caagtcggga 180
 ggtccctcct gctcttcctt tttccaaatc cgtaaaattt acagattttt ttaatgtatg 240
 aagcccactt tctttatgcg gttgctccca gtcaagacac cgccattggt gttcacacgc 300
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 aactcacagc atttgaagga agttggagtg gtagagttag aaatcatttg aaggagattg 420
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 tttgcagcaa ttagatcttt cctttaatgc tttgagtggg agaattccga cagagtttg 540
 gaacctctct cttttgcggc aataagttgg agtggtagt ggagtggtag agtgagaaat 600
 acacagccta atctgaagga agttggagtg atagagttag aaatggatcg tcttcttctc 660
 ttcattgtga tgcttgatgat gatgggtgta gcaatgccta ctattctca acaaatcact 720
 agt 723

<210> 112
 <211> 1301
 <212> DNA
 <213> Pinus radiata

<400> 112
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 ccttccccgt cctaccaaaa cccaaacttc ttgcccgaaac tcaccttcta tgtattaatt 180
 cttattatta ttttaataata ataaatagtt aaacataaat ttataaatta attaatTTTT 240
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 attggccata attaccctaa ttaattataa ttaaaatata tagttataat taaaaaattg 360
 tatattttat aaattgaatt aagaatttct gatgatatt catcattcaa ttccatctta 420
 tcaaagttag agggaatagt taacctgta ctatgcttat tcatagctaa catttgccaa 480
 gttcgtacta ggagacttgg atttttttta aaacataatt ttggcagtaa aaagtgaatt 540
 ctattgtttt gaaaacaaaa caaaatacag gaagcgtgat tgtggggttg ttgttgaact 600
 tgcccgggca aaagaagaat gattagcggg agaggagtta gtagttacgt tcaactaaat 660
 gcgtgactaa attattttatc ctccgccatg gaagcaggtg attcacacac aacttgctgc 720
 acacattgct ctcaaaccct tcctataaat atccgtagca ggggctgcga tgatacacia 780
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<210> 113

<211> 3070
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 113

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gataaaaaagg	tagggagata	ggggatctcc	ccgtctgatg	cctcgggtag	gttgaaaata	180
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aaaaaaaaa						3070

<210> 114
 <211> 1227
 <212> DNA
 <213> Pinus radiata

<400> 114
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 agttattccc ctaatgtgga gacaattgat tagaagttct atgagaaaaa tccaatcatg 180
 ttaaagtgac ccctaattgt aagacaattg attagaaatt ctatgaaaaa aatccaatca 240
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 gatggagaag ctccagaatc ttcggga 1227

<210> 115
 <211> 1169
 <212> DNA
 <213> Eucalyptus grandis

<400> 115
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 aaattgagag ggagaatttt agaacaaaat cagatttggg gaatacatgc cattttaggg 180
 ggattttggg gatttcgcat atggcgctcg gtcgctcgcg ccttcttctt tacagattgt 240
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 ttcatatat gattattacg tcataatgat cgattttctag aaatttggag acatatgtaa 360
 attcaggagg aatttcaaga aacgcgcgtt actttgaaag ggtctcgagt caaagtgtc 420
 aaattgagag ggagaatttt agaacaaaat cagatttggg gaatacatgc cattttaggg 480
 ggattttggg gatttcgcat atggcgctcg gtcgctcgcg ccttcttctt tacagattgt 540
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<210> 116

<211> 947
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 116
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 acgaggggtcg aattttatagt gggcgaagga tgattaggtg gaatatgaca agaaaatagg 180
 tttgaaagag aaataaatat tatgatagtg aaggggtcttc acatgggttag tttgatctgt 240
 ccgaggggtgt ccacccttgt ctgatccgca attgctcttg gtcgtgctga attttagagt 300
 gtagccaaag taagaatttt ctttctactg tccggacatt tcgattgcta catggaccat 360
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1766

<210> 118

<211> 1928

<212> DNA

<213> Eucalyptus grandis

<400> 118

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<211> 602

<212> DNA

<213> Eucalyptus grandis

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<213> Pinus radiata

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<211> 1273

<212> DNA

<213> Eucalyptus grandis

<400> 126

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<211> 3720

<212> DNA

<213> Eucalyptus grandis

<400> 127

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